

REMARKS

Claims 7 through 23 were presented for examination and remain pending in the present application.

Claims 15 through 20 were indicated as being allowable if rewritten in independent form. Claim 15 has been amended to include the features of claim 13. Thus, claim 15, as well as claims 16 through 20 that depend therefrom, are believed to be in condition for allowance.

Claims 7 through 23 were rejected under 35 U.S.C. §112, first paragraph. The Office Action asserted that there is no support for the "flow direction that is essentially horizontal" of claim 7 or "the melt in a horizontal flow direction" of claim 13. Applicants respectfully traverse this rejection.

Figures 2 and 4 of the present application clearly illustrate glass flow 2 as having a horizontal flow. Further, and with reference to the last paragraph of page 11 of the present application, the present application clearly provides:

"Coil 1 shown in Figure 1 has endless-screw-shaped [helical] running windings 1.1, 1.2, 1.3. In the present case, the windings lie in a horizontal plane, precisely in the direction of glass flow 2 (emphasis added)."

In light of the above, it is respectfully submitted that the present application clearly provides support for the horizontal flow direction as claimed. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claims 7 through 14 and 21 through 23 were rejected under

35 U.S.C. §102(b) or in the alternative under 35 U.S.C. §103(a) over U.S. Patent No. 4,687,646 to Mateika et al. (Mateika), under 35 U.S.C. §102(b) or in the alternative under 35 U.S.C. §103(a) over U.S. Patent No. 4,049,384 to Wenckus et al. (Wenckus), and under 35 U.S.C. §102(b) or in the alternative under 35 U.S.C. §103(a) over French Patent No. 2,768,257 to Sobolev et al. (Sobolev).

The Office Action asserts that Mateika, Wenckus, and Sobolev disclose or suggest a glass melt that moves in a horizontal direction. Applicants respectfully traverse this assertion.

The Office Action acknowledges that the crucible of Mateika has an open top that serves as the inlet and a bottom that serves as the outlet. Similarly, the Office Action acknowledges that Wenckus has an open top that serves as both the opening and the outlet. Finally, the Office Action acknowledges that Sobolev has an opening at the top and a discharge at the bottom.

It is respectfully submitted that the Office Action itself acknowledges that Mateika, Wenckus, and Sobolev disclose only flow from the top to the bottom (i.e., vertical flow) and not the claimed horizontal flow.

It is further submitted that to achieve the claimed horizontal flow, the devices of Mateika, Wenckus, and Sobolev would need to be turned on their sides. This modification would render the devices of Mateika, Wenckus, and Sobolev inoperative. For example, turning the crucibles of Mateika and Wenckus on their side would merely cause the melt to prematurely pour out of the open top. In Sobolev, turning the melt chamber 20 on its

side would cause the melt to foul the waste gas filtering means 75 at output 30, the sensors at pipes 34, and pipes 31 for returning filtrate. Accordingly, it is submitted that Mateika, Wenckus, and Sobolev also do not suggest the claimed horizontal flow.

Notwithstanding the above, claim 7 now clarifies that the channel is arranged so that the glass melt has a flow direction that is essentially horizontal to allow for continuous operation of the device. Support for this amendment can be found in the specification at least at page 6, lines 7-8.

In contrast, it is submitted that the devices of Mateika, Wenckus, and Sobolev allow for only batch-type or discontinuous operation.

For example, Mateika provides that after completion of the melting and crystallisation process, the wall of the crucible formed by the pipes 1 is moved away from the bottom 15 and the contents can then very easily be pushed out the open cylinder. See col. 2, line 60 through col. 4, line 5. Thus, Mateika clearly provides a discontinuous or batch-type crucible.

Wenckus, as acknowledged by the Office Action, uses the open top of the crucible system to serve as both the opening and the outlet. Since the open top of Wenckus is both the inlet and the outlet, it clearly provides for only discontinuous or batch-type operation.

Sobolev, as provided by its English equivalent, U.S. Patent No. 6,058,741, includes cooled induction melter 20 (Fig. 5) having a first output 74. In use, the radioactive mixture in

the inductor 20 is subjected to heating and melting while oxyolith is simultaneously fed thereto. After that, the first output 74 for discharge of the melt is opened and the melt is discharged into receiving containers 91. See col. 9, lines 25-32. Thus, it is submitted that the melter of Sobolev is akin to the crucibles of Mateika and Wenckus, in that it provides for batch-type or non-continuous operation.

For at least the reasons set forth above, it is submitted that Mateika, Wenckus, and Sobolev do not disclose or suggest the channel of claim 7 that is arranged so that the glass melt has a flow direction that is essentially horizontal to allow for continuous operation of the device.

Claim 7 is therefore believed to be in condition for allowance. Since claims 8 through 12 depend from the aforementioned claim 7, they are also believed to be in condition for allowance. Reconsideration and withdrawal of the rejection to claims 7 through 12 are respectfully requested.

Also notwithstanding the traversal above, claim 13 has been amended to clarify that the channel channels the melt in a horizontal flow direction to allow for continuous operation of the device. Support for this amendment can be found in the specification at least at page 6, lines 7-8.

Again, it is submitted that the devices of Mateika, Wenckus, and Sobolev allow for only batch-type or discontinuous operation. Clearly, the batch-type devices of Mateika, Wenckus, and Sobolev do not disclose or suggest the continuous operation of claim 13.

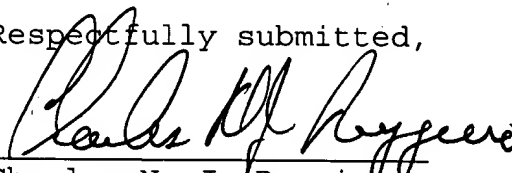
Claim 13 is therefore believed to be in condition for allowance. Claims 14 and 21 through 23 are also believed to be in condition for allowance since they depend from allowable claim 13. Reconsideration and withdrawal of the rejection to claims 14 and 21 through 23 are respectfully requested.

Claims 7 through 22 of the present application were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 15 through 22 of co-pending Application Serial No. 09/807,945. Applicants will address such this rejection once it is made non-provisional by way of a terminal disclaimer and/or argument.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is earnestly solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below.

Respectfully submitted,



Date: January 7, 2004

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